AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A herpes simplex virus vector (HSV vector) comprising:

(i) a ~~transcriptional initiation regulatory~~ region containing a promoter of [[a]] the human calponin gene comprising the nucleotide sequence of Seq. ID No.:1,

(ii) [[a]] the ICP4 gene encoding a transcription factor essential for initiation of a herpes viral replication which is integrated downstream of the ~~transcriptional initiation regulatory~~ region containing a promoter of the human calponin gene ~~of an ICP4 gene~~, [[and]]

(iii) a DNA that encodes a desired protein linked downstream of the ICP4 gene, and expresses the desired protein under the control of said region containing a promoter of the human calponin gene; and

[[(iii)]] (iv) a thymidine kinase gene [[:]] , wherein the HSV vector is not expressed or replicated in normal differentiated cells, said HSV vector is capable of suppressing its replication at a desired period by using the thymidine kinase gene, and is obtained by the steps comprising: (i) inserting a DNA fragment comprising the ~~transcriptional initiation regulatory~~ region containing a promoter of the human calponin gene into [[a]] the ribonucleotide reductase gene locus by a homologous recombination; (ii) ~~infecting a virus mixed solution of the homologous recombination to~~ cotransfecting said fragment within the ribonucleotide reductase gene locus with a viral DNA in a cell that activates the ~~transcription initiation regulatory~~ region containing a promoter of [[a]] the human calponin gene or a cell that expresses the human

calponin gene; and (iii) purifying said vector to a single clone without using an agarose overlay assay by using the expression of a gene integrated in the vector as an index.

2-5. (Cancelled)

6. (Currently amended) The HSV vector according to ~~any one of claims~~ claim 1~~, 3, or 4~~, wherein an enhancer is integrated upstream of the ~~transcriptional initiation regulatory~~ region containing a promoter of [[a]] the human calponin gene.

7. (Previously presented) The HSV vector according to claim 6, wherein the enhancer is a 4F2 enhancer.

8. (Cancelled)

9. (Currently amended) The HSV vector according to claim [[8]] 1, wherein the DNA that encodes the desired protein is linked to the ICP4 gene via an internal ribosomal entry site.

10. (Previously presented) The HSV vector according to claim 9, wherein the DNA that encodes the desired protein is an apoptosis promotion-related gene.

11. (Previously presented) The HSV vector according to claim 9, wherein the DNA that encodes the desired protein is a DNA that encodes a protein having a suppressive action of angiogenesis.

12. (Previously presented) The HSV vector according to claim 9, wherein the DNA that encodes the desired protein is a DNA that encodes a protein having a suppressive action against cancer metastasis.

13. (Previously presented) The HSV vector according to claim 9, wherein the DNA that encodes the desired protein is a DNA that encodes a protein having a suppressive action against cancer growth.

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Previously presented) The HSV vector according to claim 1, wherein the vector is tumor cell-specific, proliferating smooth muscle-specific in tumor neovasculature, proliferating smooth muscle-specific in proliferating vascular lesion, proliferating mesangial cell-specific in glomerulonephritis, or proliferating myofibroblast-specific in fibrosis.

19. (Cancelled)

20. (Currently amended) A method for expression/replication of a gene, protein or a peptide of a vector that is not expressed/replicated in normal differentiated cells, comprising, introducing the HSV vector according to claim 1 into the cells and tissues of an organism, then expressing and replicating the gene, protein, or ~~protein~~ peptide of the vector.

21. (Currently amended) A method for suppressing the expression/replication of a gene, protein or a peptide of the HSV vector according to claim 1 comprising,

(i) introducing the HSV vector according to claim 1 into the cells and tissues of an organism,

(ii) expressing and replicating the gene, protein or peptide of the vector, and

(iii) ~~wherein~~ suppressing the expression/replication of the vector at a later desired period by administering an antiviral drug, wherein said antiviral drug is aciclovir or ganciclovir.

22. (Cancelled)

23. (Previously presented) A method for detecting the *in vivo* distribution of the HSV vector according to claim 1, wherein the HSV vector is introduced into the cells and tissues of an

organism, then expressed and replicated, and thymidine kinase activity by said vector is determined.

24. (Previously presented) The method according to claim 23, wherein the determination of the thymidine kinase activity is a determination by positron emission tomography using an uracil derivative FIAU labeled with ^{124}I.

25. (Original) The method according to any one of claims 20 to 24, wherein the cells and tissues in the organism are tumor tissues, vascular or lymphatic vessel constriction tissues, nephritic tissues or fibrotic tissues.

26. (Previously presented) A therapeutic drug comprising the HSV vector according to claim 1 wherein proliferating smooth muscle cells are targeted.

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Currently amended) A method for producing a cell-specific HSV vector comprising the steps of:

(a) preparing a DNA fragment comprising, ~~mixing a solution containing~~

(i) ~~an infected cell that activates the transcription initiation regulatory region of the human calponin gene or a cell that expresses the human calponin~~

~~gene with a herpes simplex virus vector, that comprises a transcriptional initiation regulatory~~ a region containing a promoter of [[a]] the human calponin gene,

(ii) [[a]] the ICP4 gene encoding a transcription factor essential for initiation of a herpes viral replication which is integrated downstream of the ~~transcriptional initiation regulatory~~ region containing said promoter ~~of an ICP4 gene , and~~

(iii) a DNA that encodes a desired protein linked downstream of the ICP4 gene, and expresses the desired protein under the control of said region containing a promoter of the human calponin gene, and

[[(iii)]] (iv) a thymidine kinase gene;

(b) inserting said DNA fragment ~~solution~~ into the ~~a gene fragment containing the transcriptional initiation regulatory region of the human calponin gene to a~~ ribonucleotide reductase gene locus by homologous recombination;

(c) cotransfecting said fragment within the ribonucleotide reductase locus with a viral DNA in a cell that activates the region containing a promoter of the human calponin gene or a cell that expresses the human calponin gene; and

[[(c)]] (d) purifying to a single clone by limiting dilution without using agarose overlay assay using the expression of a gene integrated in the HSV vector as an index, wherein said HSV vector is not expressed or replicated in normal differentiated cells and that is capable of suppressing its replication at a desired period by using the thymidine kinase gene.

36. (Currently amended) The method for producing the HSV vector according to claim 35, wherein the cell is an ICP4 ~~non-expressing~~ (-) cell.